



U.S. Fish & Wildlife Service

Hawaii Community Conservation Initiative Status Report 2004



Hawai`i Community Conservation Initiative



Cover photo:
Mauna Kea, Hawai`i
Mauna Kea from Saddle Road—
Fencing to help control feral
ungulates will protect the māmane
forests which are foraging habitat for
the endangered Palila (*Loxoides
ballieui*).

Above photo:
Pu`u Wa`awa`a, Hawai`i
The Pu`u Wa`awa`a Reservoir serves
as a resource for fire suppression
activities and waterbird enhancement.
A pair of endangered Nēnē (*Branta
sandvicensis*) and their gosling swim
and forage in the reservoir area.

Photos and maps are courtesy of the
U.S. Fish and Wildlife Service except
where noted.

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Executive Summary



On the shores of Mo'omomi, Moloka'i, the local community is involved with conservation of the precious coastal resources

Hawai'i ESA Community Conservation Initiative:

***Working to
reduce the
conflict between
game animal
management and
endangered
species
conservation***

The **Hawai'i ESA Community Conservation Initiative (HCCI)** focuses on implementation of projects that reduce the conflict between game mammal management and endangered species management in Hawai'i. The major cause of conflict is the difficulty in managing game mammal populations in areas that harbor rare plant, bird and invertebrate species.

As native species continue to decline, the State and Federal governments are forced to list more species as endangered and (in the case of the Federal government) designate their critical habitat. Declines in native species directly impact the cornerstones of Hawai'i's economy, including tourism, agriculture, forestry, ranching, housing, and military training, when game animal impacts on endangered species force more direct regulation of commercial activities, and prompt more lawsuits from environmental organizations. Thus, the conflict between the hunting and the environmental communities exacts a significant economic, social and environmental cost to all Hawai'i residents.

A potential solution to this problem is the implementation of locally based endangered species/public hunting land management. The overall goal of this initiative is to provide the financial resources to local communities to implement a strategy that reconciles the needs of endangered species with the continued presence of suitable game mammal populations.

Increasing the quality of hunting opportunities (by improving habitat that supports game mammals or opening new areas to hunting) should result in reduced interest in maintaining game populations in areas important to endangered species. Making new areas available to hunters through access agreements, easements or other means, will be an important part of this strategy. Likewise, increasing populations of certain endangered species in appropriate areas should result in reduced endangered species regulation of activities that support game mammal populations.

While environmentalists and hunters may have differing values, they share many important common goals for land management, such as managing factors that degrade habitat quality. Both sides realize that endangered species recovery will ultimately mean less regulation and more flexibility. Solutions address reduction of feral animal pressure on endangered species and/or reduction of endangered species regulation on hunting activities.

Over 25 projects in Hawai'i and Maui Counties have been funded through this collaborative effort over the past two years. Fiscal year 2004 will see this program available to all of the Hawaiian Islands. Through public meetings and stakeholder input, many new projects to better manage game animals and endangered species are being developed.

Hawaii Community Conservation Initiative

Fiscal Year 2003



Arboreal 'ōhai (*Sesbania tomentosa*) growing in the Kawela watershed is threatened by feral ungulate browsing.

Program expanded to include Maui, Moloka'i, and Lāna'i as well as the island of Hawai'i.

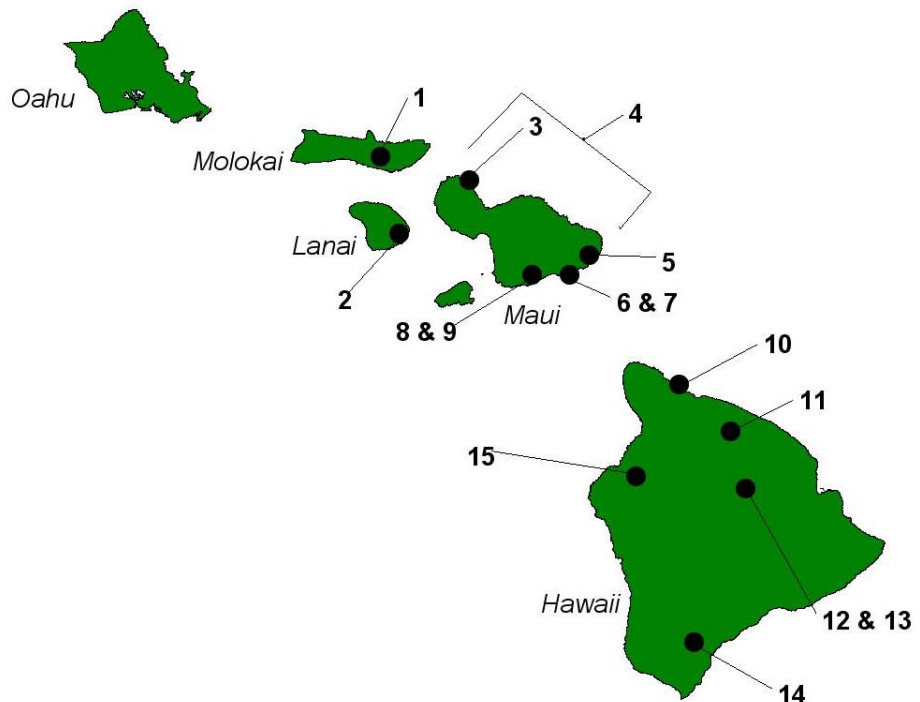
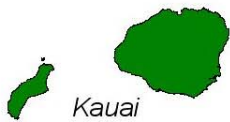
Funding

The USFWS received \$750,000 for implementation of the HCCI program in fiscal year 2003. Public meetings were held on all of the targeted islands to involve stakeholders in the project development process. Based on the success of the pilot program, fiscal year 2003 saw the expansion of the HCCI program to include Maui County.

FY03 HCCI Projects

- 1 Kāwela Plantation Project
- 2 East Lāna'i Hunting Initiative
- 3 Kahakuloa NAR-GMA Project
- 4 Axis Deer Control on Maui
- 5 East Maui Ungulate Control
- 6 Waiho'i Valley Reconnaissance
- 7 Kaupō Road Improvement
- 8 Kahikinui Forest Reserve Project
- 9 Kahikinui Restoration Fence
- 10 Hunter Education/ Loulu Preservation Project
- 11 Humu'ula Trail Repair
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- 14 Ka'ū Forest Reserve Project
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FY2003 Project Locations



Hawai`i Community Conservation Initiative FY 2003 Funded Projects

Kāwela Plantation Project



Kāwela watershed

Partners: The Nature Conservancy

Location: Island of Molokaʻi

Description: The main objective of the Kāwela Plantation project is to protect the native species of the Kāwela Plantation middle and upper common lands through fencing and ungulate control using methods and guidelines established on lands to the east at Kamalō and Kapualei, Molokaʻi. Reducing ungulate pressure in this watershed will improve native shrubland, reduce erosion and encourage recovery of endangered plant species.

East Lānaʻi Hunting Initiative



Lānaʻihale in the foreground, West Maui mountains in the background

Partners: Lānaʻi Institute for the Environment

Location: Island of Lānaʻi

Description: The East Lānaʻi Hunting Initiative is intended to protect and restore the native forest ecosystem of Lānaʻihale for the benefit of endangered, threatened and candidate species on the island of Lānaʻi and to provide access for hunting opportunities on a temporary basis. This project will provide greater access to East Lānaʻi for hunters and land managers thereby facilitating natural resources management in the area between Kapoho/Naha and Kehewai Ridges. Phase I of this Initiative will fund road repair (ʻĀwehi Road, Keomuku and Puʻunēnē trail) to facilitate access to East Lānaʻi. It is anticipated that increasing hunting of feral ungulates will benefit the native species in East Lānaʻi.

Kahakuloa Natural Area Reserve/ Game Management Area Fence



ʻŌhia lehua (Metrosideros polymorpha)

Partners: West Maui Mountains Watershed Partnership, Hawaiʻi Division of Forestry and Wildlife

Location: Island of Maui

Description: The West Maui Mountains Watershed Partnership will fence a portion of the boundary between the Kahakuloa Natural Area Reserve (KNAR) and the Kahakuloa Game Management Area (KGMA) to prevent ungulates from entering KNAR and to provide improved hunting opportunities within the bordering KGMA. The KGMA is the only Game Management Area on Maui specifically managed for sustainable pig hunting. Reducing ingress of pigs into KNAR would help protect listed plants.

Hawai`i Community Conservation Initiative FY 2003 Funded Projects

Axis Deer Control Project



Axis deer (Axis axis)

Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Maui

Description: Axis deer were introduced to Maui in the late 1960s for hunting and subsistence opportunities, however increased concern about property damage, ecosystem damage and disease and crop damage have prompted managers to address the situation. The coordinator will assist land managers with control plans for axis deer throughout the island of Maui.

East Maui Feral Ungulate Control



East Maui

Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Maui

Description: The objective of the East Maui Feral Ungulate Control Project is to reduce ungulate numbers in high priority areas of the East Maui Watershed Partnership. Feral ungulates are a threat to listed and other native species.

Waiho`i Valley Reconnaissance



Survey of Waiho`i Valley by stakeholders

Partners: Hāna Ranch, Ko`olau Volunteer Hunting Organization

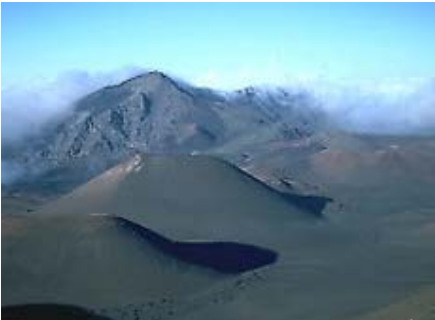
Location: Island of Maui

Description: Hāna Ranch, USFWS and hunting organization representatives participated in the reconnaissance of the Waiho`i Valley to assess its value as a pig hunting area. This valley area is remote and the access is limited. The reconnaissance team used a helicopter to make aerial observations and to gain access for ground observations.

Accomplishments: The project has been completed. The survey included a USFWS botanist, Hāna Ranch land managers and a representative from the Ko`olau Volunteer Hunting Organization. The team determined the presence of feral pigs to be fairly low and that increasing access for hunters would not benefit the hunting community.

Hawai`i Community Conservation Initiative FY 2003 Funded Projects

Kaupō Road Improvement



Haleakalā National Park

Partners: Haleakalā National Park , Kaupō Ranch

Location: Island of Hawai`i

Description: National Park Service personnel will improve access on Kaupō Road leading up to Haleakalā National Park and adjacent privately owned lands. The road is used by park biologists to conduct endangered species management activities, and private landowners and land managers to conduct natural resource management activities.

Kahikinui Forest Reserve Restoration Project



A`e (Zanthoxylum hawaiiensis)
Photo by Marie Bruegmann

Partners: Kahikinui Game and Land Management Ohana

Location: Island of Maui

Description: The purpose of the Kahikinui Forest Reserve Restoration Project is to enhance the koa forest of Kahikinui through ungulate fencing and native plant propagation. Rare and endangered plants like the A`e (*Zanthoxylum hawaiiensis*) can be protected with exclosure sites and monitoring. This project will be conducted with the assistance of the Kahikinui Game and Land Management Ohana (KGLMO) and Ka `Ohana o Kahikinui.

Kahikinui Restoration Fence



Koa blossoms (Acacia koa)
Photo by Gregory Koob

Partners: Living Indigenous Forest Ecosystems

Location: Island of Maui

Description: To restore native habitats through fencing and hunting in the Kahikinui Forest Reserve, island of Maui. To accomplish this task, groups of volunteers will complete approximately 7 miles of fence construction for management within the Kahikinui Forest Reserve.

Hawai`i Community Conservation Initiative FY 2003 Funded Projects

Hunter Education / Loulu Preservation Project



*Prichardia
palm*

Partners: Laupāhoehoe Nui LLC

Location: Island of Hawai`i

Description: Laupāhoehoe Nui LLC, a private landowner of the ahupua`a of Laupāhoehoe Nui, on the island of Hawai`i proposes to provide hunting opportunities to reduce ungulate populations within the Kohala Forest and provide long-term protection of rare and endangered species. The restoration project would include helicopter transport of community hunters to this remote area to reduce pig populations, and fencing of the rare loulu (*Pritchardia lanigera*) and its associated habitat.

Accomplishments: Surveys of the area have been conducted.

Humu`ula Trail Project



Acacia koa
Photo by Gregory Koob

Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Hawai`i

Description: This project includes repair of the Humu`ula access trail, improving hunter and hiker access to the Manowai`alae and Hilo Forest Reserves. Currently, a washout has made the trail inaccessible to hunters and hikers. Hunting pressure on the pig population in the area will help minimize adverse effects of feral pigs on the listed and other native species within the reserves.

Mauna Kea Feral Ungulate Removal



Mouflon sheep on the move

Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Hawai`i

Description: The Hawai`i Division of Forestry and Wildlife will remove feral ungulates (sheep, goats, and mouflon sheep) from the Mauna Kea Forest Reserve, the 5,143 acre Pu`u Māli and the 1,399 acre Ka`ohe conservation easement areas.

Hawai`i Community Conservation Initiative FY 2003 Funded Projects

Mauna Kea Fence Repair Project



Mauna Kea: a view from Saddle Road

Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Hawai`i

Description: The Hawai`i Division of Forestry and Wildlife will contract the repair of a section of the ungulate exclusion fence to protect the Mauna Kea Forest Reserve which is critical habitat for the endangered palila (*Loxioides bailleui*), a native Hawaiian honeycreeper.

Ka`ū Forest Reserve Project



Ōha wai (Clermontia lindseyana)

Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Hawai`i

Description: The 56,805 acre Ka`ū Forest Reserve is largely inaccessible for public hunting. To improve the hunting access, the Ka`ū Forest Reserve Project will survey and improve five routes that lead into the reserve: Makino Road, Wood Valley, Hā`ao Springs, Ka`ū-Kahuku and Galimba. Signs and fences will be posted to ensure that hunters and their dogs do not inadvertently trespass onto adjacent private property.

Pu`u Wa`awa`a Coordinator



Pu`u Wa`awa`a wildlife area

Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Hawai`i

Description: The coordinator will implement the management plan for Pu`u Wa`awa`a ahupua`a, including organizing restoration activities in the forest, improving hunting opportunities in designated areas, implementing wildfire fuels and feral animal control to achieve objectives of the management plan. This position is crucial to the protection and management of this conservation area in North Kona, Hawai`i.

Hawaii Community Conservation Initiative

Fiscal Year 2002



The 1999 Pu'u Anahulu burn area was once native dry forest that supported rare and endangered plants and animals. It has been converted to alien-dominated grassland over the past 100 years by the cycle of repeated fire and grass invasion.

A pilot program established on the island of Hawai'i.

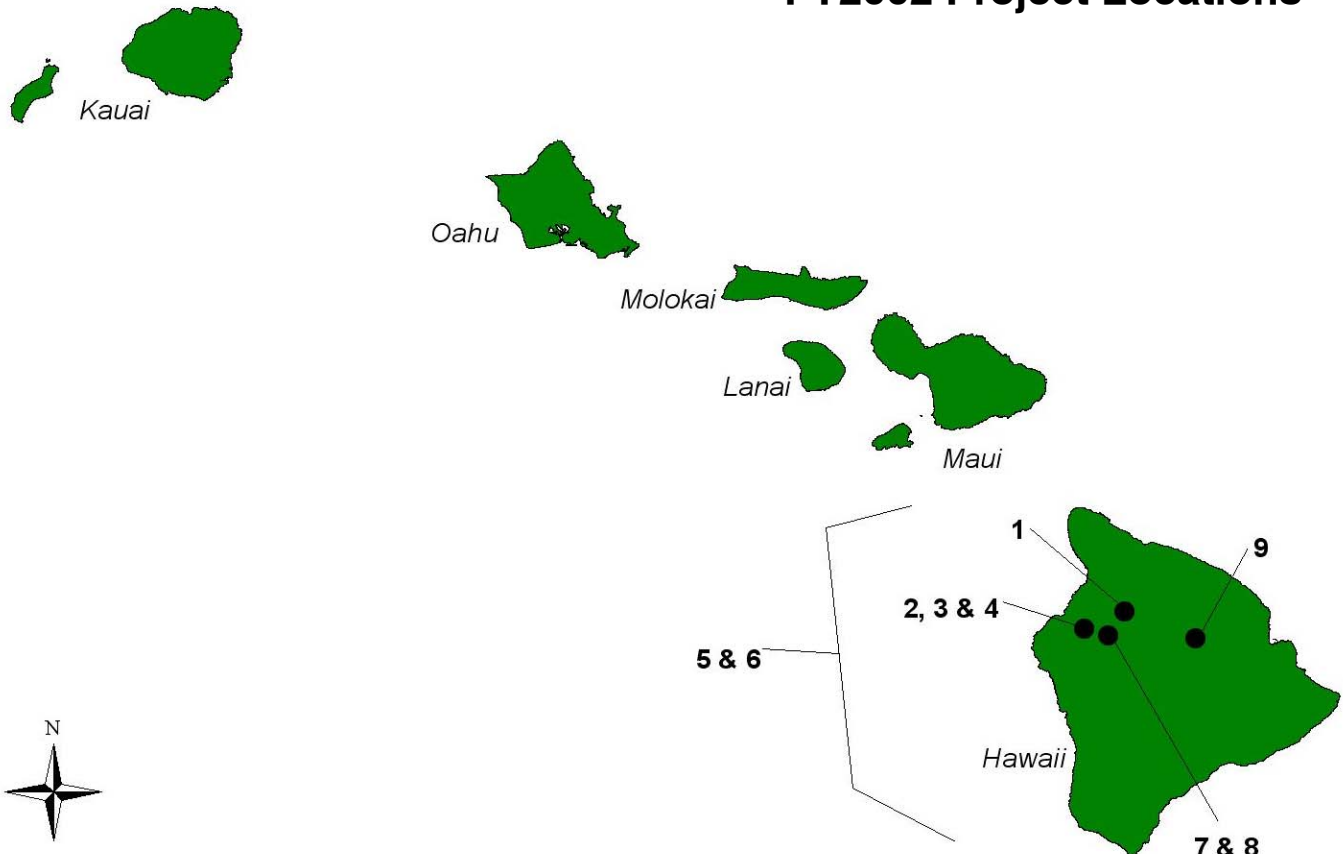
Funding

In fiscal year 2002, Congress directed the USFWS to implement the HCCI as a pilot program on the island of Hawai'i. The USFWS received \$750,000 for implementation of the HCCI program in fiscal year 2002. Stakeholder meetings were held on the island of Hawai'i to gather input for project development.

FY02 HCCI Projects

- 1 Pu'u Anahulu Endangered Plant Recovery Project
- 2 Pu'u Anahulu Game Habitat Enhancement Project
- 3 Pu'u Anahulu Metes & Bounds Survey
- 4 Pu'u Anahulu Wildland Fuelbreak Establishment and Maintenance
- 5 Hawaii Field Guide to Endangered Plants
- 6 Feral Pig Research Bibliography
- 7 Pu'u Wa'awa'a Reservoir Repair and Waterbird Habitat Enhancement Project
- 8 Pu'u Wa'awa'a Water System Infrastructure Assessment
- 9 Mauna Kea Fence Assessment

FY2002 Project Locations



Hawai`i Community Conservation Initiative FY 2002 Funded Projects

Pu`u Anahulu Endangered Plant Recovery Project



Plant survey by State botanist, Lyman Perry

Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Hawai`i

Description: This endangered plant recovery effort will entail the establishment and maintenance of three 10-acre fenced ungulate exclosures within the upper portion of the proposed Pu`u Anahulu Game Management Area. The project includes construction of a water catchment system at each recovery site, removal or management of invasive plant populations within exclosure, and the planting of 2000 endangered plants and related understory species in the exclosure. The objective of this project is to establish three endangered plant recovery units that will provide for the management of habitats necessary for the long-term maintenance of endangered plant species populations.

Pu`u Anahulu Game Habitat Enhancement Project



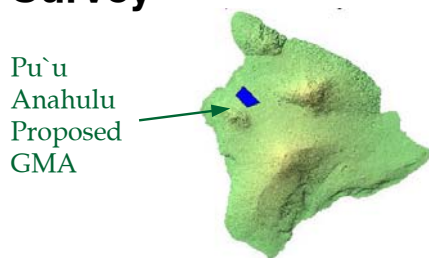
Game hunters at Pu`u Anahulu

Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Hawai`i

Description: Four 5-acre habitat enhancement sites will be established along the 3,000 ft. contour firebreak road within the lower portion of the proposed Pu`u Anahulu Game Management Area. Each of the four sites will include temporary fencing, water catchment units and 2000 tree and shrub seedlings to provide cover and forage. Anti-browse strategies will be applied to protect the plants from browsing until they are established. The goal of the project is to enhance game mammal and game bird habitat to support larger game populations for recreational hunting within the Pu`u Anahulu Game Management Area.

Pu`u Anahulu GMA Metes and Bounds Survey



Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Hawai`i

Description: The purpose of this project is to produce a written "Metes and Bounds" description and map of the land proposed as a Game Management Area at Pu`u Anahulu. In order for the proposed Pu`u Anahulu Game Management Area to be officially designated as such, a "Metes and Bounds" survey is required. Designation of this area as a Game Management Area will dedicate lands for game management.

Accomplishments: Map surveys have been completed.

Hawai`i Community Conservation Initiative FY 2002 Funded Projects

Pu`u Anahulu Wildland Fuelbreak Establishment and Maintenance



State Botanist, Lyman Perry, in the upper Pu`u Anahulu dry forest that is disappearing due to repeated wildland fires.

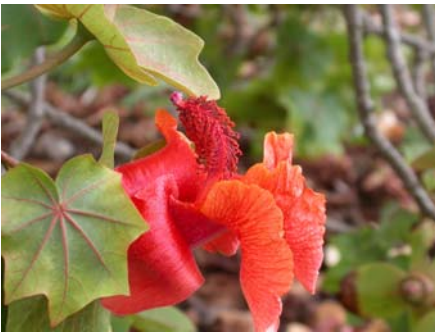
Partners: Hawai`i Division of Forestry and Wildlife

Location: Island of Hawai`i

Description: The project includes construction of wildland fire fuelbreaks to protect dryland forest and shrub habitat for listed species and game animals. Fuelbreaks will be established bordering existing firebreak roads. A network of fuelbreaks within the proposed Pu`u Anahulu GMA will reduce both the number of wildfires that occur and the size of inevitable wildfires. The purpose of this project is to protect the native dry forest of Pu`u Anahulu from large, frequent wildfires. This area supports populations of 12 endangered plant and animal species. This forest is in decline due to its inability to survive repeated alien grass-fueled wildfires. This wildfire fuels management effort will establish and maintain a network of fuelbreaks throughout the proposed GMA.

Accomplishments: Fuelbreaks have been completed.

Hawai`i Field Guide to Endangered Plants



Koki'o (*Kokia drynarioides*)

Partners: Hawai`i Division of Forestry and Wildlife, Lyon Arboretum Association

Location: Island of Hawai`i

Description: A full color booklet of endangered plant species that are found on the island of Hawai`i. Brief descriptions will be provided for major public hunting areas of the Island of Hawai`i with maps showing ecological zones, list of likely endangered species and identification of important alien plants impacting the specific areas. A layperson's plant identification booklet will enable hunters and naturalists to assist biologists and natural resource managers in locating and identifying listed species in the field.

Accomplishments: The project is near to completion.

Feral Pig Research Bibliography



Wild pig (*Sus scrofa*)

Partners: The Berryman Institute of Wildlife Damage Management

Description: The goal of this project is to assemble an annotated bibliography of research since 1950 on the effects that feral pigs have on the environment. The pig (*Sus scrofa*) is not native to Hawai`i and the presence of feral pigs in Hawai`i is a contentious issue. This bibliography should shed light on the role that pigs play in Hawai`i's ecosystem.

Accomplishments: This project has been completed. A link to the bibliography can be found at the following website
<http://www.berrymaninstitute.org/PDF/FERAL.pdf>.

Hawai'i Community Conservation Initiative FY 2002 Funded Projects

Pu'u Wa'awa'a Reservoir Repair and Waterbird Habitat Enhancement



Pu'u Wa'awa'a reservoir

Partners: Hawai'i Division of Forestry and Wildlife, Ducks Unlimited

Location: Island of Hawai'i

Description: The reservoir at the State's Pu'u Wa'awa'a parcel will be relined to support wildland fire suppression activities. The shallow end of the reservoir will be slightly reshaped to enhance habitat for endangered waterbirds. The Pu'u Wa'awa'a reservoir provides a critical fire suppression resource as a deep dip pond supporting helicopter bucket operations. Controlling wildland fires is an important step in controlling the spread of alien plants. The reservoir also supports several breeding pairs of nēnē, Hawaiian goose (*Branta sandvicensis*) and small populations of endangered ae'o, Hawaiian stilts (*Himantopus mexicanus knudseni*).

Pu'u Wa'awa'a Water System Infrastructure Survey



Partners: Lyon Arboretum Association, University of Hawai'i-Dept of Geography, Hawai'i Division of Forestry and Wildlife

Location: Island of Hawai'i

Description: Water is critical to suppression of wildland fires, management of game species habitat, restoration of dryland ecosystems, and recovery of endangered plant species. Water infrastructure at Pu'u Wa'awa'a is needed for all these uses. The project funded a detailed assessment of the condition and quality of the water system infrastructure on the State's Pu'u Wa'awa'a parcel.

Accomplishments: The assessment has been completed.

Mauna Kea Ungulate Fence Condition Assessment



Along the fence line, Mauna Kea

Partners: Hawai'i Division of Forestry and Wildlife

Location: Island of Hawai'i

Description: This project will provide a detailed assessment of the condition of the 52-mile Mauna Kea ungulate enclosure fence. This will include a written report and map documentation of the exact GPS locations of each section needing work and a description of the type of maintenance or repair needed. The results of this assessment can be used by the State or other partners to repair this fence and protect the important habitat for Palila, an endangered Hawaiian honeycreeper (*Loxioides bailleui*) found only on the island of Hawai'i.

Accomplishments: This project is nearly complete with south, north, and west portions of the fenced surveyed.

U.S. Fish and Wildlife Service
Pacific Islands Office
300 Ala Moana Blvd., Room 3-122
Honolulu, Hawaii 96850
Phone: 808/792 9400
Fax: 808/ 792 9580

<http://pacificislands.fws.gov>

Hawaii Relay
TTY 1 800/643 8833
Voice 1 800/ 546 2565

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